



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

WILLIAM J. AILA, JR.
CHAIRPERSON
WILLIAM D. BALFOUR, JR.
SUMNER ERDMAN
LORETTA J. FUDDY, A.C.S.W.,
M.P.H.
NEAL S. FUJIWARA
LAWRENCE H. MIIKE, M.D., J.D.

WILLIAM M. TAM
DEPUTY DIRECTOR

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

December 21, 2011
Honolulu, Hawaii

Proposed Declaratory Ruling No. DEC-ADM11-S12
Amending Declaratory Ruling No. DEC-ADM03-S9 to Increase the Volume of Material to be
Removed to Less than 5,000 Cubic Yards and the Duration of Stream Clearing Work to
Less Than 30 Days for Stream Channel Alteration Permits for the
State Department of Transportation, Statewide

APPLICANT:

State of Hawaii
Department of Transportation
727 Kakoi Street
Honolulu, HI 96819

LANDOWNER:

Same.

SUMMARY OF REQUEST:

Proposed Declaratory Ruling No. DEC-ADM11-S12, amending Declaratory Ruling No. DEC-ADM03-S9 to increase the volume of material to be removed to less than 5,000 cubic yards and the duration of stream clearing work to less than 30 days for stream channel alteration permits for the State Department of Transportation, Highways Division, statewide.

LOCATION: Statewide.

BACKGROUND:

Hawaii Revised Statutes ("HRS"), Section 46-11.5 gives responsibility to the counties "to maintain all channels, streambeds, streambanks, and drainageways unless such channels, streambeds, streambanks, and drainageways are privately owned or owned by the State, in which event such channels, streambeds, streambanks, and drainageways shall be maintained by their respective owners."

The State Department of Transportation periodically needs to clear channels, streambeds, streambanks, and drainageways on its lands to restore drainage capacity to carry off storm waters for flooding concerns and to remove debris causing unsanitary conditions. The language in the Water Code exempts routine streambed

and maintenance activities, but it does not specifically define what constitutes routine streambed maintenance activity.

On April 16, 2003, the Commission approved Declaratory Ruling DEC-ADM03-S9 pertaining specifically to the Department of Transportation, Highways Division, that identified certain types of watercourses that did not meet the Water Code definition of a stream and, therefore, did not require stream channel alteration permits (SCAP) from the Commission. The Declaratory Ruling listed certain activities that qualified as "routine streambed and drainageway maintenance activities and maintenance of existing facilities" and did not require SCAPs from the Commission. The Declaratory Ruling also identified other relatively minor activities that required SCAPs but only Chairperson approval. All other stream channel alteration activities, (usually more extensive) required approval from the full Commission. The purpose of the April 2003 Declaratory Ruling (DEC-ADM03-S9) was to provide guidance to DOT as to which stream clearing activities were subject to SCAPs pursuant to HRS §174C-71 and to allow the Chairperson to issue future SCAPs to the DOT for relatively minor stream clearing activities that meet certain criteria. (See Exhibit 1.)

In addition to greater regulatory clarity, the Declaratory Ruling:

1. Saves time and money required for the applicant, reviewing agencies and the Commission and its staff by reducing the number of formal Commission approvals for relatively minor stream clearing activities;
2. Avoids after-the-fact SCAP applications and associated fines; and
3. Retains Commission jurisdictional oversight on clearing activities that may adversely affect instream uses.

DEC-ADM03-S9 gave the Chairperson authority to approve stream channel alteration permits for stream clearing activities that met the following criteria:

1. A stream channel alteration permit application with the following:
 - a. Clean Water Act, Section 404 permit from the U. S. Army Corps of Engineers.
 - b. Clean Water Act, Section 401 Water Quality Certification and Best Management Practices Plan from the Department of Health. If the project is not subject to these sections of the Clean Water Act the applicant shall submit written documentation from the Corps of Engineers citing the exemption.
 - b. Clean Water Act, Section 402 National Pollutant Discharge Elimination System (NPDES) permit if applicable.
 - c. Written description of the scope of work including:
 - 1) Map showing location of the affected stream reach.
 - 2) Cross section(s) showing typical contours of the before and after removal of material.
 - 3) Quantity of material to be removed.
 - 4) Method of clearing including a description of the types of equipment to be used.
 - 5) Location and practice of spoils disposal.
 - 6) Frequency of clearing time required for each clearing.
 - 7) Photographs.
2. Work must not alter stream diversion works or the interim instream flow standard.
3. Amount of material to be removed is less than 500 cubic yards and removal will take less than 2 weeks to complete the work.
4. Clearing activity does not include the placement or removal of any structures in the stream.
5. Clearing activity must not be after-the-fact.
6. Clearing activity must not be in violation of any other applicable Federal, State, or County permit.
7. Clearing activity must not restrict access to property.
8. Clearing activity must not be subject to a Special Management Area Permit (HRS, Chapter 205A).

9. The State Historic Preservation Division and the Division of Aquatic Resources must concur in writing that the work may proceed.
10. SCAPs approved by the Chairperson are subject to the following conditions:
 - a. Standard SCAP Conditions approved by the Chairperson.
 - b. Special conditions added by the Chairperson including but not limited to:
 - 1) Best Management Practice (BMP) Plan acceptable to the Department of Health.
 - 2) Notification to the State Historic Preservation Division prior to clearing activities.
 - c. Permit will be valid until the Commission revokes the permit or until amends the Declaratory Ruling.

On September 23, 2010, the Department of Transportation's (DOT) consultant, the Limtiaco Consulting Group, prepared and submitted a list of 101 DOT stream crossings on Oahu for the Commission staff to review. Staff determined that fifty-four (54) stream crossings would require SCAPs for DOT's proposed maintenance activities while the remaining crossings were not considered streams according to the definition in the State Water Code. The Limtiaco Consulting Group submitted SCAP applications for fifty-two (52) of the 54 stream crossings. The two remaining streams (Pauoa and Lulukū Streams) are perennial streams that require additional information. They will be addressed at a later date.

DOT's proposed maintenance activities for fifty (50) out of the fifty-two (52) DOT stream crossings qualify for SCAP approval by the Chairperson pursuant to DEC-ADM03-S9.

On November 16, 2011, the Commission approved a Stream Channel Alteration Permit for the DOT's stream maintenance activities for Ahuimanu Bridge and Stream and Halawa Stream because the proposed scope of work exceeded the parameters of DEC-ADM03-S9 of removing less than 500 cubic yards of material and taking more than two weeks to complete and required approval by the Commission.

DESCRIPTION:

The proposed Declaratory Ruling No. DEC-ADM11-S12 will amend Declaratory Ruling No. DEC-ADM03-S9 by revising the volume of material to be removed from less than 500 cubic yards to less than 5,000 cubic yards and the duration of stream clearing work from less than two weeks to less than 30 days for stream channel alteration permits for the State Department of Transportation, Highways Division statewide that the Chairperson is authorized to approve.

ANALYSIS:

Agency Review Comments:

On August 8, 2011, the U.S. Army Corps of Engineers (COE) approved General Permit GP 2011-001, Maintenance Clearing of Rivers, Streams, Storm Drains, and Beach Areas in the State of Hawaii. This authorization was made pursuant to Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403). Some of the provisions of the 2011 General Permit include:

- No filling activities or maintenance clearing projects when the Corps determines that the public interest requires regulation through an individual permit.
- No excavation or dredging for the sole purpose of restoring navigation depth for vessels.
- Removal of siltation shoals, sand plugs, excessive vegetation and debris by mechanical means are allowed to restore flow capacities and reduce flooding or other public safety hazards.
- Maintenance clearing of river and stream mouths must not extend more than 50 feet seaward of the Mean High Water (MHW) line.
- No blasting, new dredging or dredging that changes the character, scope, or elevation of the original contour, or that previously authorized.

- Maintenance clearing activities must be conducted only during periods of low flow and little or no rainfall, except in emergencies where there is imminent threat to life and/or property.
- The use of bulldozers which result in a discharge to waters of the U.S. will require a Clean Water Act (CWA) Section 404 permit.

The COE commented that it has jurisdiction over any perennial stream as a “water of the U.S.” and is evaluating its jurisdiction over “intermittent” streams.

Department of Health (DOH) Clean Water Branch (CWB) commented:

- Appropriate and effective Best Management Practices (BMPs) measures or best control or treatment must be properly implemented and maintained during the proposed stream channel maintenance clearing and sand plug removal in compliance with HAR Chapter 11-54.
- No BMP Plan was submitted to ensure that the proposed maintenance clearing and sand plug removal will be conducted in a manner that will not cause applicable requirements as specified in HAR to be violated in the receiving State waters.
- Additional information is required for accumulated silt, vegetation and sand plug removal, as well as excavation, clearing, and disposal methods.
- Site-Specific Construction Best Management Practices (SSCBMPs) Plan must be established and properly implemented for each project site.
- An Applicable Monitoring and Assessment Plan (AMAP) should be designed and implemented to ensure the adequacy of BMP measures implemented.
- The applicant should be informed that no person shall discharge any water pollutants into state waters, or cause, or allow any water pollutant to enter state waters except in compliance with HRS §342D-50(a), or a permit, or variance by the director.
- DOT Highways Division should notify the DOH CWB in writing of the stream clearing and/or sand plug removal schedule.

The City and County of Honolulu, Department of Planning and Permitting commented:

- Stream maintenance is exempt from Special Management Area permit requirements.
- No grading work is involved based on the information provided.
- A City stockpiling permit will be required if it is necessary to temporarily stockpile dredged sediment material in excess of 100 cubic yards prior to disposal at an approved site.

The Department of Hawaiian Home Lands had no objections to the project.

The U.S. Fish and Wildlife Service, Office of Hawaiian Affairs, University of Hawaii Environmental Center did not submit comments as of the date of preparation of this submittal.

DLNR Review Comments:

- Land Division: no objections.
- State Parks: no objections.
- Forestry and Wildlife: DOT should conduct visual and auditory inspections of the area to be cleared to ensure that no nesting native and/or endangered waterbirds are present prior to any clearing activity.

DLNR Engineering, State Historic Preservation Division (SHPD) and Division of Aquatic Resources (DAR) did not submit comments as of the date of preparation of this submittal.

Chapter 343 Environmental Assessment (EA) Compliance Review:

EA Triggers: In accordance with HRS §343-5 (a), and HAR §11-200-8 (a) (1), the applicant's proposed activities do not trigger an Environmental Assessment because "Operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features, involving negligible or no expansion or change of use beyond that previously existing," is an exempt class of action.

Staff Review

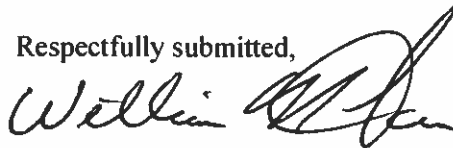
DOT routine stream maintenance activities may require the removal more than 500 cubic yards of material and debris and/or take longer than two weeks to complete both of which exceed the scope of work listed in the Commission's Declaratory Ruling, DEC-ADM03-S9 for the DOT's Highways Division. DOT's recently approved stream channel alteration permit for Ahuimanu Bridge and Stream and Halawa Stream will remove approximately 14,000 cubic yards of material and debris from Ahuimanu Stream and 8,000 cubic yards from Halawa Stream. Each activity will take approximately three months to complete, and DOT may use heavy equipment (loaders, excavators and dump trucks) in the stream channel.

Staff recommends that DEC-ADM03-S9 for the DOT's Highways Division stream clearing activities be amended to allow Chairperson approval of DOT stream clearing activities to remove quantities less than 5,000 cubic yards of material and take less than 30 days to complete, subject to the conditions of DEC-ADM11-S12.

RECOMMENDATION:

That the Commission amend declaratory ruling, DEC-ADM03-S9, to allow Chairperson approval of DOT stream clearing activities that remove less than 5,000 cubic yards and take less than 30 days to complete according to the terms and conditions listed herein. The new declaratory ruling to supersede DEC-ADM03-S9 will be DEC-ADM11-S12.

Respectfully submitted,



WILLIAM M. TAM
Deputy Director

- Exhibits:
1. April 16, 2003, DEC-ADM03-S9 for DOT Highways Division
 2. Revised April 16, 2003, DEC-ADM03-S9 for DOT Highways Division
 3. Declaratory Ruling No. DEC-ADM11-S12
 4. Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL:

WILLIAM J. AILA, JR.
Chairperson



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON

MEREDITH J. CHING
CLAYTON W. DELA CRUZ
CHIYOME L. FUKINO, M.D.
BRIAN C. NISHIDA
HERBERT M. RICHARDS, JR.

ERNEST Y.W. LAU
DEPUTY DIRECTOR

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

April 16, 2003
Honolulu, Oahu

Declaratory Ruling No. DEC-ADM03-S9
Department of Transportation, Highways Division
STREAM CLEARING ACTIVITIES

BACKGROUND:

Hawaii Revised Statutes, section 46-11.5 gives responsibility to the counties "to maintain all channels, streambeds, streambanks, and drainageways unless such channels, streambeds, streambanks, and drainageways are privately owned or owned by the State, in which event such channels, streambeds, streambanks, and drainageways shall be maintained by their respective owners." The State Department of Transportation periodically needs to clear channels, streambeds, streambanks, and drainageways, on its lands, to restore drainage capacity to carry off storm waters for flooding concerns, and to remove debris, which is likely to create an unsanitary condition or to otherwise become a public nuisance. The language in the Water Code exempts routine streambed and maintenance activities, but it does not specifically define what constitutes a routine streambed maintenance activity.

The Commission, in March 1999, approved a declaratory ruling, DEC-ADM99-S8, pertaining specifically to the City and County of Honolulu, that identifies certain types of watercourses that do not meet the Water Code definition of a stream and, therefore, do not require stream channel alteration permits (SCAP) from the Commission. The declaratory ruling also lists certain activities that qualify as "routine streambed and drainageway maintenance activities and maintenance of existing facilities" that do not require SCAPs from the Commission. The declaratory ruling identifies other relatively minor activities that require SCAPs, but with the approval of only the Chairperson of the Commission, rather than the full Commission. All other

EXHIBIT 1

stream channel alteration activities, that are usually more extensive, require SCAPs from the full Commission. The purpose of the March 1999 declaratory ruling (DEC-ADM99-S8) is to provide guidance to the City and County of Honolulu on which stream clearing activities are subject to SCAPs pursuant to Hawaii Revised Statutes §174C-71 and to allow the Chairperson to issue future SCAPs to the City and County of Honolulu for relatively minor stream clearing activities which meet certain criteria.

Besides greater regulatory clarity, additional objectives realized through the declaratory ruling are:

1. Saving of time and money required for the applicant, reviewing agencies, Commission and staff by reducing the number of formal Commission approvals for relatively minor stream clearing activities;
2. Avoiding after-the-fact SCAP applications and associated fines; and
3. The Commission retaining jurisdictional oversight on certain clearing activities that may adversely affect instream uses.

The objectives of this declaratory ruling are the same as above, but specifically for the State Department of Transportation.

ANALYSIS/ISSUES:

The pertinent statutory language for this declaratory ruling is as follows:

HRS §174C-71(3)(A) - *"The Commission shall require persons to obtain a permit from the commission prior to undertaking a stream channel alteration; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit."*

HRS §174C-3 - *"Channel alteration" means: (1) to obstruct, diminish, destroy, modify, or relocate a stream channel; (2) to change the direction of flow of water in a stream channel; (3) to place any material or structures in a stream channel; and (4) to remove any material or structures from a stream channel.*

HRS §174C-3 - *"Stream" means any river, creek, slough, or natural watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted. The fact that some parts of the bed or channel have been dredged or improved does not prevent the watercourse from being a stream.*

HRS §174C-3 - *"Instream use" means beneficial uses of stream water for significant purposes which are located in the stream and which are achieved by leaving the water in the stream. Instream uses include, but are not limited to:*

- (1) *Maintenance of fish and wildlife habitats;*
- (2) *Outdoor recreational activities;*
- (3) *Maintenance of ecosystems such as estuaries, wetlands, and stream vegetation;*

- (4) *Aesthetic values such as waterfalls and scenic waterways;*
- (5) *Navigation;*
- (6) *Instream hydropower generation;*
- (7) *Maintenance of water quality;*
- (8) *The conveyance of irrigation and domestic water supplies to downstream points of diversion; and*
- (9) *The protection of traditional and customary Hawaiian rights.*

Key in this language, but not specifically defined, are the terms “*natural watercourse*” and “*routine streambed and drainageway maintenance activities*”. The Commission’s administrative rules offer no further clarification. Staff believes these terms, in addition to protecting instream uses, make the crucial distinction whether a SCAP is required for watercourse clearing activities.

The approach proposed by the staff is to follow the Declaratory Ruling DEC-ADM99-S8 which was issued to the City and County of Honolulu for their stream clearing activities. A copy of this Declaratory Ruling is attached as Exhibit 1. The basis for DEC-ADM99-S8 was based on a review of 19 stream clearing activities done by the City and County of Honolulu.

Part A of this analysis addresses those watercourse clearing activities which are exempted from the SCAP process, while Part B is an analysis of past SCAPs for relatively minor stream clearing projects that should continue to require SCAPs but with Chairperson approval if certain criteria are met.

Part A. - Watercourse clearing activities for which SCAPs are not required

To assess if a SCAP is required in responding to requests for determination or SCAP applications for watercourse clearing activities, staff first assesses if the water course is a ‘*natural watercourse*’ to make sure it qualifies as a stream. If it does not meet this criterion, then the clearing activity is not subject to the SCAP process.

Staff believes the following types of watercourses do not meet the definition of a stream and, therefore, do not require a SCAP:

1. Watercourses which are man-made or are part of an irrigation system;
2. Excavated subdivision drains;
3. Man-made drainage channels in low lying coastal plains areas;
4. Highway interceptor ditches;
5. Auwai; and
6. Dry gulches (per Declaratory Ruling No. DEC-94-S3 relating to Manawainui Gulch, Molokai).

If the watercourse is determined to be ‘*natural*’, and therefore meets the definition of stream, the staff then assesses the magnitude of channel alteration and the reasonable expectation of impacts to instream uses. From past experience, staff believes the following stream clearing activities qualify as ‘*routine maintenance*,’ do not constitute significant channel alteration or impact on instream uses, and therefore, qualify to be exempt from SCAPs under HRS §174C-71(3)(A):

1. Manual clearing of streams or work without the use of heavy equipment.
2. Clearing of sand plugs at stream mouths, as long as the sand plugs are not submerged or do not contain silt or mud.
3. Clearing of lined channels, as long as the work does not disturb submerged (accumulated) silt and mud.
4. Clearing of vegetation, rock, silt, and debris of artificially lined (concrete or grouted rubble paving) non-submerged portions of streams. These activities also include removal of rocks from boulder basins.
5. Reconstruction of channel linings to original configuration. These include activities such as repairing of spalls, patching concrete channel linings, and re-grouting of rubble pavement.

Part B: - Stream clearing activities that may affect instream uses:

The scope of these stream-clearing projects usually includes the use of heavy equipment (bulldozer, bobcat, loaders, clamshell, dragline, etc.). Such stream and drainageway clearing is most often done by the City and County of Honolulu, Department of Facility Maintenance (Formerly Department of Public Works), but a few similar projects have also been done by private landowners, the Department of Transportation and Department of Land and Natural Resources.

After reviewing and analyzing past stream clearing projects, staff has found:

1. The overriding concern about stream clearing projects is the possible effects the stream clearing will have on the "maintenance of water quality," which is an instream use. The State Division of Aquatic Resources and the United States Fish and Wildlife Service consistently raise this concern.
2. Most water quality concerns can be addressed by requiring that the applicant obtain a Section 404 permit from the Army Corps of Engineers. In cases where a 404 permit is not required, the Commission can impose a special condition on the applicant requiring a Best Management Practice Plan acceptable to the Department of Health.
3. The majority of stream clearing projects removes less than 500 cubic yards of material and takes less than two weeks to complete. Water pollution can be effectively minimized by the use of silt curtains or sandbags and by scheduling work during low streamflow conditions. Larger clearing projects usually require dewatering and may take years to implement. The staff recommends larger stream clearing projects remain subject to full agency, public, and Commission review of SCAP applications.
4. The State Historic Preservation Division may have concerns over clearing activities in selected streams where archaeological remains have previously been found. Archaeological assessments should be part of evaluating stream-clearing projects. Special conditions should be imposed where necessary. Standard SCAP conditions notify and will continue to notify applicants to take action acceptable to the State Historic Preservation Division for all non-exempt stream-clearing activities.

RECOMMENDATIONS:

That the Commission adopt Declaratory Ruling No. DEC-ADM03-S9, STREAM CLEARING ACTIVITIES FOR THE STATE DEPARTMENT OF TRANSPORTATION, to apply only to work done by the State Department of Transportation as follows:

- A. Stream channel alteration permits are not required for activities listed in Part A.
- B. The Chairperson may approve stream channel alteration permits for stream clearing activities listed in Part B that may affect instream uses, but meet the following criteria:
 - 1. The stream channel alteration permit application must contain the following:
 - a. A copy of the Clean Water Act, Section 404 permit from the U. S. Army Corps of Engineers, and the Clean Water Act, Section 401 Water Quality Certification and Best Management Practices Plan from the Department of Health. In the event that the project is not subject to these sections of the Clean Water Act the applicant shall submit written documentation from the Corps of Engineers citing the exemption.
 - b. Clean Water Act Section 402 (NPDES) permit if applicable.
 - c. Written description of the scope of work including:
 - 1) A location map showing the affected stream reach. Cross section(s) showing typical contours of the before and after removal of material. Photographs.
 - 2) Amount of material to be removed.
 - 3) Method of clearing including a description of the types of equipment to be used.
 - 4) Location and practice of spoils disposal.
 - 5) Frequency of clearing time required for each clearing.
 - 6) Written concurrence from the State Historic Preservation Division and the Division of Aquatic Resources that the work may proceed.
 - 2. Must not alter stream diversion works or interim instream flow standard.
 - 3. The amount of material to be removed is less than 500 cubic yards and will take less than 2 weeks to complete the work.
 - 4. Clearing activity does not include the placement or removal of any structures in the stream.
 - 5. Clearing must not be after-the-fact.
 - 6. Clearing must not be in violation of any other applicable Federal, State, or County permit.
 - 7. Must not restrict access to property.
 - 8. Must not be subject to a Special Management Area Permit (HRS, Chapter 205A).
 - 9. Chairperson approved SCAPs are subject to the following conditions:

- a. Standard Chairperson Approved SCAP Conditions.
- b. Special conditions may be added by the Chairperson including but not limited to:
 - 1) Requiring the applicant to produce a Best Management Practice Plan acceptable to the Department of Health;
 - 2) Requiring the applicant to notify the State Historic Preservation Division on start of clearing activities.
- c. The permit will be valid as long as the Commission does not revoke the permit or until the Commission amends this Declaratory Ruling.

Respectfully submitted,

ERNEST Y.W. LAU
Deputy Director

Exhibit 1 (Declaratory Ruling No. DEC-ADM-99-S8) – *(NOT ATTACHED)*

Exhibit 2 (Standard Conditions for Department of Transportation Stream Clearing Projects)

**STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS
FOR STREAM CLEARING ACTIVITIES**

1. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and City and County of Honolulu governments.
2. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
3. The applicant shall utilize appropriate erosion control measures during construction, and shall perform construction activities only during periods of low stream flow. The applicant shall prevent debris and construction materials, including cement, petroleum products, and other pollutants, from entering the stream. Wash and dust control water shall be properly disposed.
4. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division (692-8015) immediately. Work may commence only after written concurrence by the State Historic Preservation Division.

EXHIBIT 2



WILLIAM J. AILA, JR.
CHAIRPERSON
WILLIAM D. BALFOUR, JR.
SUMNER ERDMAN
LORETTA J. FUDDY, A.C.S.W., M.P.H.
NEAL S. FUJIMURA
LAWRENCE H. MIKE, M.D., J.D.
WILLIAM M. TAM
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

COMMISSION ON WATER RESOURCE MANAGEMENT

April 16, 2003
Honolulu, Oahu

DECLARATORY RULING No. DEC-ADM11-S12
State Department of Transportation
STREAM CLEARING ACTIVITIES

BACKGROUND:

Hawaii Revised Statutes, section 46-11.5 gives responsibility to the counties "to maintain all channels, streambeds, streambanks, and drainageways unless such channels, streambeds, streambanks, and drainageways are privately owned or owned by the State, in which event such channels, streambeds, streambanks, and drainageways shall be maintained by their respective owners." The State Department of Transportation periodically needs to clear channels, streambeds, streambanks, and drainageways, on its lands, to restore drainage capacity to carry off storm waters for flooding concerns, and to remove debris, which is likely to create an unsanitary condition or to otherwise become a public nuisance. The language in the Water Code exempts routine streambed and maintenance activities, but it does not specifically define what constitutes a routine streambed maintenance activity.

The Commission, in March 1999, approved a Declaratory Ruling, DEC-ADM99-S8, pertaining specifically to the City and County of Honolulu that identifies certain types of watercourses that do not meet the Water Code definition of a stream and, therefore, do not require stream channel alteration permits (SCAP) from the Commission. The Declaratory Ruling also lists certain activities that qualify as "routine streambed and drainageway maintenance activities and maintenance of existing facilities" that do not require SCAPs from the Commission. The Declaratory Ruling identifies other relatively minor activities that require SCAPs, but with the approval of only the Chairperson of the Commission, rather than the full Commission. All other stream channel alteration activities, that are usually more extensive, require SCAPs from the full Commission. The purpose of the March 1999 Declaratory Ruling (DEC-ADM99-S8) is to provide guidance to the City and County of Honolulu on which stream clearing activities are subject to SCAPs pursuant to Hawaii Revised Statutes §174C-71 and to allow the Chairperson to issue future SCAPs to the City and County of Honolulu for relatively minor stream clearing activities which meet certain criteria.

In April 2003, the Commission approved Declaratory Ruling, DEC-ADM03-S9, pertaining specifically to the Department of Transportation, Highways Division that was similar to DEC-ADM99-S8 for the City and County of Honolulu's "routine streambed and drainageway maintenance activities and maintenance of existing facilities."

Formatted: Bottom: 0.5"

Deleted: STAFF SUBMITTAL
1
for the meeting of the 1

Deleted: eclaratory

Deleted: uling

Deleted: 03-S9

Deleted: , Highways Division

Deleted: d

Deleted: r

Deleted: .

Deleted: d

Deleted: r

Deleted: d

Deleted: r

Deleted: -----Page Break-----

Deleted: d

Deleted: r

Besides greater regulatory clarity, the Declaratory Ruling:

1. Saves time and money required for the applicant, reviewing agencies, Commission and staff by reducing the number of formal Commission approvals for relatively minor stream clearing activities;
2. Avoids after-the-fact SCAP applications and associated fines; and
3. Retains jurisdictional oversight on certain clearing activities that may adversely affect instream uses.

The objectives of this Declaratory Ruling are the same as above, but specifically for the State Department of Transportation.

ANALYSIS/ISSUES:

The pertinent statutory language for this Declaratory Ruling is as follows:

HRS §174C-71(3)(A) - *"The Commission shall require persons to obtain a permit from the commission prior to undertaking a stream channel alteration; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit."*

HRS §174C-3 - *"Channel alteration" means: (1) to obstruct, diminish, destroy, modify, or relocate a stream channel; (2) to change the direction of flow of water in a stream channel; (3) to place any material or structures in a stream channel; and (4) to remove any material or structures from a stream channel.*

HRS §174C-3 - *"Stream" means any river, creek, slough, or natural watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted. The fact that some parts of the bed or channel have been dredged or improved does not prevent the watercourse from being a stream.*

HRS §174C-3 - *"Instream use" means beneficial uses of stream water for significant purposes which are located in the stream and which are achieved by leaving the water in the stream. Instream uses include, but are not limited to:*

- (1) Maintenance of fish and wildlife habitats;
- (2) Outdoor recreational activities;
- (3) Maintenance of ecosystems such as estuaries, wetlands, and stream vegetation;
- (4) Aesthetic values such as waterfalls and scenic waterways;
- (5) Navigation;
- (6) Instream hydropower generation;
- (7) Maintenance of water quality;
- (8) The conveyance of irrigation and domestic water supplies to downstream points of diversion; and
- (9) The protection of traditional and customary Hawaiian rights.

Key in this language, but not specifically defined, are the terms "natural watercourse" and "routine streambed and drainageway maintenance activities". The Commission's administrative

Deleted: Error! Reference source not found. Error! Reference source not found.

Deleted: additional objectives realized through

Deleted: d

Deleted: r

Deleted: are

Deleted: ing

Deleted: of

Deleted: ing

Deleted: The Commission r

Deleted: ing

Deleted: d

Deleted: r

Deleted: d

Deleted: r

December 21, 2011

Page 3

rules offer no further clarification. Staff believes these terms, in addition to protecting instream uses, make the crucial distinction whether a SCAP is required for watercourse clearing activities.

Deleted: Error! Reference source not found. Error! Reference source not found.

Part A of this analysis addresses those watercourse clearing activities which are exempted from the SCAP process, while Part B is an analysis of past SCAPs for relatively minor stream clearing projects that should continue to require SCAPs but with Chairperson approval if certain criteria are met.

Deleted: The approach proposed by the staff is to follow the Declaratory Ruling DEC-ADM99-S8 which was issued to the City and County of Honolulu for their stream clearing activities. A copy of this Declaratory Ruling is attached as Exhibit 1. The basis for DEC-ADM99-S8 was based on a review of 19 stream clearing activities done by the City and County of Honolulu.

Part A. - Watercourse clearing activities for which SCAPs are not required

To assess if a SCAP is required in responding to requests for determination or SCAP applications for watercourse clearing activities, staff first assesses if the water course is a 'natural watercourse' to make sure it qualifies as a stream. If it does not meet this criterion, then the clearing activity is not subject to the SCAP process.

Staff believes the following types of watercourses do not meet the definition of a stream and, therefore, do not require a SCAP:

1. Watercourses which are man-made or are part of an irrigation system;
2. Excavated subdivision drains;
3. Man-made drainage channels in low lying coastal plains areas;
4. Highway interceptor ditches;
5. Auwai; and
6. Dry gulches (per Declaratory Ruling No. DEC-94-S3 relating to Manawainui Gulch, Molokai).

If the watercourse is determined to be 'natural', and therefore meets the definition of stream, the staff then assesses the magnitude of channel alteration and the reasonable expectation of impacts to instream uses. From past experience, staff believes the following stream clearing activities qualify as 'routine maintenance,' do not constitute significant channel alteration or impact on instream uses, and therefore, qualify to be exempt from SCAPs under HRS §174C-71(3)(A):

1. Manual clearing of streams or work without the use of heavy equipment.
2. Clearing of sand plugs at stream mouths, as long as the sand plugs are not submerged or do not contain silt or mud.
3. Clearing of lined channels, as long as the work does not disturb submerged (accumulated) silt and mud.
4. Clearing of vegetation, rock, silt, and debris of artificially lined (concrete or grouted rubble paving) non-submerged portions of streams. These activities also include removal of rocks from boulder basins.
5. Reconstruction of channel linings to original configuration. These include activities such as repairing of spalls, patching concrete channel linings, and re-grouting of rubble pavement.

Deleted: accumulated)

Part B: Stream clearing activities that may affect instream uses:

Deleted: :

The scope of these stream-clearing projects usually includes the use of heavy equipment (bulldozer, bobcat, loaders, clamshell, dragline, etc.). Such stream and drainageway clearing is most often done by the City and County of Honolulu, Department of Facility Maintenance (Formerly Department of Public Works), but a few similar projects have also been done by private landowners, the Department of Transportation and Department of Land and Natural Resources.

December 21, 2011

Page 4

After reviewing and analyzing past stream clearing projects, staff has found:

1. The overriding concern about stream clearing projects is the possible effects the stream clearing will have on the "maintenance of water quality," which is an instream use. The State Division of Aquatic Resources and the United States Fish and Wildlife Service consistently raise this concern.
2. Most water quality concerns can be addressed by requiring that the applicant obtain a Section 404 permit from the Army Corps of Engineers. In cases where a 404 permit is not required, the Commission can impose a special condition on the applicant requiring a Best Management Practice Plan acceptable to the Department of Health.
3. Stream clearing projects may remove more than 500 cubic yards of material and take more than two weeks to complete. Water pollution can be effectively minimized by the use of silt curtains or sandbags and by scheduling work during low streamflow conditions. Larger clearing projects usually require dewatering and may take years to implement. The staff recommends larger stream clearing projects remain subject to full agency, public, and Commission review of SCAP applications.
4. The State Historic Preservation Division may have concerns over clearing activities in selected streams where archaeological remains have previously been found. Archaeological assessments should be part of evaluating stream-clearing projects. Special conditions should be imposed where necessary. Standard SCAP conditions notify and will continue to notify applicants to take action acceptable to the State Historic Preservation Division for all non-exempt stream-clearing activities.

RECOMMENDATIONS:

That the Commission adopt Declaratory Ruling No. DEC-ADM-11-S12, STREAM CLEARING ACTIVITIES FOR THE STATE DEPARTMENT OF TRANSPORTATION (attached) which shall apply only to work done by the State Department of Transportation.

Respectfully submitted,

WILLIAM M. TAM
Deputy Director

Exhibit 1 Declaratory Ruling No. DEC-ADM-03-S9

Exhibit 2 Declaratory Ruling No. DEC-ADM-11-S12

Deleted: Error! Reference source not found. Error! Reference source not found.

Deleted: The majority of s

Deleted: s

Deleted: less

Deleted: takes less

Deleted: ----- Page Break -----

Deleted: 03-S9

Deleted: , to

Deleted: as follows:

Deleted: <#>Stream channel alteration permits are not required for activities listed in Part A.¶

B. The Chairperson may approve stream channel alteration permits for stream clearing activities listed in Part B that may affect instream uses, but meet the following criteria:¶

¶<#>The stream channel alteration permit application must contain the following:¶

¶a. A copy of the Clean Water Act, Section 404 permit from the U. S. Army Corps of Engineers, and the Clean Water Act, Section 401 Water Quality Certification and Best Management Practices Plan from the Department of Health. In the event that the project is not subject to these sections of the Clean Water Act the applicant shall submit written documentation from the Corps of Engineers citing the exemption.¶

b. Clean Water Act Section 402 (NPDES) permit if applicable.¶

c. Written description of the scope of work including:¶

¶<#>A location map showing the affected stream reach. Cross section(s) showing typical contours of the before and ... [1]

Formatted: Indent: Left: 0.25", Hanging: 0.25"

Deleted: 7

Deleted: Must not restrict access to property ¶ ... [2]

Deleted: 8

Deleted: Must not be subject to a Special Management Area Permit ... [3]

Deleted: ¶

Deleted: ¶

Deleted: ERNEST Y. W. LAU

Deleted: (D

Deleted: 99

Deleted: 8

Formatted: Indent: Left: 0", Hanging: 0.75"

Deleted: (Standard Conditions for Department of Transportation Stre ... [4]

**STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS FOR
DEPARTMENT OF TRANSPORTATION
STREAM CLEARING ACTIVITIES**

1. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.
2. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
3. The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
4. Before proceeding with any work authorized by the Commission, the applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
5. The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.
6. The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.
7. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.
8. The applicant shall conduct visual and auditory inspections of the area to be cleared to ensure that no nesting native and/or endangered waterbirds are present prior to any clearing activity and consult with the Department's Division of Forestry and Wildlife in the event nesting native and/or endangered waterbirds are present.

Deleted: Error! Reference source not found. Error! Reference source not found.

Deleted: 1
1

Deleted: FOR

Deleted: 1
1

Formatted: Font: 11 pt

Deleted: City

Deleted: and C

Formatted: Font: 11 pt

Deleted: of Honolulu

Formatted: Font: 11 pt

Deleted: 1

Deleted: 2

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Deleted: 1

3. The applicant shall utilize appropriate erosion control measures during construction, and shall perform construction activities only during periods of low stream flow. The applicant shall prevent debris and construction materials, including cement, petroleum products, and other pollutants, from entering the stream. Wash and dust control water shall be properly disposed.

Deleted: 4

Formatted: Font: 11 pt

Deleted: (692-8015)

Formatted: Font: 11 pt

Deleted: 1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

EXHIBIT 21

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

Deleted: 1

EXHIBIT 21

Stream channel alteration permits are not required for activities listed in Part A.

- B. The Chairperson may approve stream channel alteration permits for stream clearing activities listed in Part B that may affect instream uses, but meet the following criteria:

The stream channel alteration permit application must contain the following:

- a. A copy of the Clean Water Act, Section 404 permit from the U. S. Army Corps of Engineers, and the Clean Water Act, Section 401 Water Quality Certification and Best Management Practices Plan from the Department of Health. In the event that the project is not subject to these sections of the Clean Water Act the applicant shall submit written documentation from the Corps of Engineers citing the exemption.
- b. Clean Water Act Section 402 (NPDES) permit if applicable.
- c. Written description of the scope of work including:

A location map showing the affected stream reach. Cross section(s) showing typical contours of the before and after removal of material. Photographs.

Amount of material to be removed.

Method of clearing including a description of the types of equipment to be used.

Location and practice of spoils disposal.

Frequency of clearing time required for each clearing.

Written concurrence from the State Historic Preservation Division and the Division of Aquatic Resources that the work may proceed.

Must not alter stream diversion works or interim instream flow standard.

3. The amount of material to be removed is less than 500 cubic yards and will take less than 2 weeks to complete the work.
4. Clearing activity does not include the placement or removal of any structures in the stream.
5. Clearing must not be after-the-fact.

Clearing must not be in violation of any other applicable Federal, State, or County permit.

Must not restrict access to property.

Must not be subject to a Special Management Area Permit (HRS, Chapter 205A).

Chairperson approved SCAPs are subject to the following conditions:

- a. Standard Chairperson Approved SCAP Conditions.
- b. Special conditions may be added by the Chairperson including but not limited to:
 - 1) Requiring the applicant to produce a Best Management Practice Plan acceptable to the Department of Health;
 - 2) Requiring the applicant to notify the State Historic Preservation Division on start of clearing activities.

The permit will be valid as long as the Commission does not revoke the permit or until the Commission amends this Declaratory Ruling.

COMMISSION ON WATER RESOURCE MANAGEMENT

DECLARATORY RULING NO. DEC-ADM11-S12

STREAM CLEARING ACTIVITIES

Department of Transportation

December 21, 2011

Based upon the December 21, 2011 submittal to the State Commission on Water Resources Management (“CWRM”) which is incorporated here by reference, the CWRM issues the following Declaratory Ruling regarding “stream clearing activities.”

“Stream Clearing Activities” come under one of three processes:

Exemptions (Part A)

Chairperson’s approval – Criteria (Part B) and Conditions (Part C)

Full Commission Action with Conditions (not addressed here)

A. Exemptions (Part A). Stream Channel Alteration Permits (“SCAP”) are not required for the following “stream clearing activities” when conducted by the State of Hawaii Department of Transportation.

1. “Watercourses” that do not meet the definition of a “stream” and, therefore, do not require a SCAP:

- a. Watercourses which are man-made or are part of an irrigation system;
- b. Excavated subdivision drains;
- c. Man-made drainage channels in low lying coastal plains areas;
- d. Highway interceptor ditches;
- e. Auwai; and
- f. Dry gulches (per Declaratory Ruling No. DEC-94-S3 relating to Manawainui Gulch Molokai).

2. Stream clearing activities that qualify as ‘routine maintenance,’ do not constitute significant channel alteration, or have a significant impact on instream uses will qualify as an exemption from the SCAP requirement pursuant to HRS §174C-71(3)(A):

- a. Manual clearing of streams or work that do not use heavy equipment;
- b. Clearing of sand plugs at stream mouths, as long as the sand plugs are not submerged or do not contain silt or mud.
- c. Clearing of lined channels, as long as the work does not disturb submerged (accumulated) silt and mud.
- d. Clearing of vegetation, rock, silt, and debris of artificially lined (concrete or grouted rubble paving) non-submerged portions of streams, including activities such as removal of rocks from boulder basins.
- e. Reconstruction of channel linings to original configuration, including activities such as repairing of spalls, patching concrete channel linings, and re-grouting of rubble pavement.

B. SCAP Approval Criteria (Part B). The CWRM Chairperson may approve Stream Channel Alteration Permits for “stream clearing activities” that use heavy equipment and affect instream uses, provided they take reasonable actions to maintain water quality and meet the Criteria set forth below:

Criteria

1. The stream channel alteration permit application must contain the following:
 - a. A copy of the Clean Water Act, Section 404 permit (from the U. S. Army Corps of Engineers), if applicable.

If the project is not subject to a section 404 Clean Water Act permit, the applicant shall submit written documentation from the Army Corps of Engineers citing the exemption.
 - b. A copy of the Clean Water Act, Section 401 Water Quality Certification and Best Management Practices Plan (from the State Department of Health), if applicable.

If the project is not subject to a section 401 Clean Water Act permit, the applicant shall submit written documentation from the State Department of Health citing the exemption.
 - c. Clean Water Act Section 402 (NPDES) permit, (from the State Department of Health), if applicable.
 - d. Written description of the scope of work including:
 - 1) A map showing the location of the affected stream reach; Cross section(s) showing typical contours of the before and after removal of material; Photographs.
 - 2) The amount of material to be removed.
 - 3) The method of clearing and description of the types of equipment to be used.
 - 4) The location and practice of spoils disposal.
 - 5) The frequency of clearing time required for each clearing.
 - 6) Written concurrence from the State Historic Preservation Division and the Division of Aquatic Resources that the work may proceed.
2. Clearing activity shall not violate the stream diversion works or interim instream flow standard.
3. Clearing activity shall not remove more than 5,000 cubic yards of material and may not take more than 30 days to complete the work.
4. Clearing activity shall not include the placement or removal of any structures in the stream.
5. Clearing activity must not be after-the-fact.
6. Clearing activity must not be in violation of any other applicable Federal, State, or County permit.
7. Clearing activity must not restrict access to property.
8. Clearing activity must not require a Special Management Area Permit (HRS, Chapter 205A).

9. The applicant shall work to minimize water pollution by the use of silk curtains, sandbags, and/or by scheduling work during low stream flow conditions.

C. Conditions (Part C). Chairperson approved SCAPs are subject to the following conditions:

1. Standard Stream Channel Alteration Permit Conditions for State Department of Transportation Stream Clearing Activities.
2. Special conditions may be added by the Chairperson including, but not limited to:
 - a. Requiring the applicant to prepare a Best Management Practices Plan acceptable to the Department of Health;
 - b. Requiring the applicant to notify the State Historic Preservation Division when clearing activities begin.
3. The permit will be valid as long as the Commission does not revoke the permit or until the Commission amends this Declaratory Ruling.

**STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS FOR
STATE DEPARTMENT OF TRANSPORTATION
STREAM CLEARING ACTIVITIES**

1. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.
2. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
3. The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
4. Before proceeding with any work authorized by the Commission, the applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
5. The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.
6. The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.
7. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.
8. The applicant shall conduct visual and auditory inspections of the area to be cleared to ensure that no nesting native and/or endangered waterbirds are present prior to any clearing activity and consult with the Department's Division of Forestry and Wildlife in the event nesting native and/or endangered waterbirds are present.

EXHIBIT 4